

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

SRI INTERNATIONAL, INC., a California
Corporation,

Plaintiff and
Counterclaim-Defendant,

v.

INTERNET SECURITY SYSTEMS, INC.,
a Delaware corporation, INTERNET
SECURITY SYSTEMS, INC., a Georgia
corporation, and SYMANTEC
CORPORATION, a Delaware corporation,

Defendants and
Counterclaim-Plaintiffs.

C. A. No. 04-1199 (SLR)

**SRI'S *REPLY* BRIEF IN SUPPORT OF MOTION
FOR JUDGMENT AS A MATTER OF LAW, OR ALTERNATIVELY,
NEW TRIAL, REGARDING INFRINGEMENT OF THE '338 PATENT**

Dated: February 17, 2009

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I. INTRODUCTION

Applying the Court's claim construction to the undisputed facts, the only reasonable conclusion a jury could have reached is that ISS's accused Proventia Network Anomaly Detection System (ADS) products infringe the asserted claims of the '338 patent. To create a defense, ISS tries to narrow the court's construction of "statistical profile" to exclude an average. The Court, however, has construed this phrase to mean a "statistical description . . . , generated through the use of statistical analysis." Under any reasonable interpretation, an average is a statistic – and the parties' experts agreed. Thus, under the Court's construction, a profile built from an average is a statistical profile.

The parties also agree that ADS calculates a current traffic rate, but dispute whether that rate qualifies as a "short-term statistical profile." However, comparing the formula used by ISS's *own* expert for calculating averages to the undisputed facts regarding how ADS determines the current traffic rate allows for only one reasonable conclusion – the ADS current traffic rate is an average. ISS's explanation of other ADS-calculated rates, which ISS admits are averages, reinforces this conclusion. There was no evidentiary basis on which a reasonable jury could have found that the ADS current traffic rate is not a "short-term statistical profile." Thus, any reasonable juror would conclude that ISS infringes the system set forth in claim 24.

The method claims of the '338 patent are also infringed because a reasonable juror would conclude that ISS's customers used ADS to infringe and that ISS intended them to do so, conclusions that were unavoidable given ISS's commercial introduction of ADS during this lawsuit, along with its advertising and instructions on how to use in a manner that infringes.

II. THE COURT’S CLAIM CONSTRUCTION OF “SHORT-TERM STATISTICAL PROFILE” INCLUDES USE OF AVERAGES

ISS’s primary dispute regarding infringement of the ’338 patent relates to the limitation “building . . . at least one short-term statistical profile from at least one measure of the network packets, the at least one measure monitoring data transfers, errors, or network connections.” In its attempt to avoid infringement and create support for the jury’s verdict, ISS attempts to re-argue claim construction by contending that an “average” is not a “statistical profile” of data and that a “statistical profile” “requires at a minimum, both an average and a variance of data.” (ISS Br. at 2, 10.) The Court, however, has already decided claim construction. Specifically, the Court construed the phrase “building at least one long-term and at one short-term statistical profile from at least one measure of the network packets” to mean:

“generating at least two separate data structures, one a statistical description representative of historical network activity, and ***one a statistical description of recent network activity***, where the statistical descriptions are based on at least one measure of network packets and are ***generated through the use of statistical analysis; in other words, something more than simply collecting and retrieving data.***”

(Jury Instructions Tr. at 2287:20-2288:4 (emphasis added)¹).

The ordinary understanding of the phrase “statistical analysis” used in the Court’s construction includes “averages” or “means.” For example, the Microsoft Excel “Statistical Functions” list submitted by Defendants during claim construction briefing listed “average” as an example of a “statistical function.” (D.I. 363, Ex. L). Moreover, dictionaries often include “mean” as part of the definition for “statistic”. (See, e.g., Halkowski Decl., Ex. A (defining “statistic” as “2. A numerical value, such as a standard deviation or ***mean***, that characterizes the sample or population from which it was derived”); Ex. B (defining “statistic” as “a quantity (as the ***mean*** of a sample) that is computed from a sample”). Because an average is generated

¹ Unless otherwise indicated, all bolded and italicized emphasis are added.

through the use of statistical analysis, under the court’s claim construction, an average is a “statistical description” and thus a “statistical profile.” The Court’s construction of “statistical profile” does not require anything more.

ISS’s and SRI’s experts also agree that averages, along with variances and standard deviations, are generated through the use of statistical analysis. For example, when explaining his understanding of rates and statistics, Stephen Smaha, ISS’s expert, explained that statistical analyses include averages or means, variances, *and* standard deviations:

“In statistics, they talk about a bell-shaped curve. A bell-shaped curve has kind of a standard shape, but it has two *characteristics that a statistician would* use for it, or *measure*, if you are trying to do something with it. *The first one is, where is the center of it. That’s the mean or the average.* The other one is the variation. Sometimes they talk about variance. Sometimes they talk about your child being two standard deviations smarter than another child, you know. So standard deviation, how wide the bell-shaped curve is. So we’ve got the average or mean and we’ve got the standard deviation.”

(Smaha Tr. 1744 at 11-22.) Similarly, SRI’s expert, Dr. Kesidis, identified means, variances, and standard deviations as examples of statistics. (Kesidis Tr. 675:3-6; 711:1-11.)²

A profile based on an average alone is sufficient to satisfy the “statistical description” limitation, and contrary to ISS’s characterization (ISS Br. at 3, 12), Dr. Kesidis never testified otherwise. In the first excerpt of Dr. Kesidis’ testimony that ISS relies upon, Dr. Kesidis

² While avoiding the use of the terms “average” and “mean,” the tutorial of Dr. Stuart Staniford, another of ISS’s experts, is also consistent with the proposition that an average is a statistical profile. Based on credit card usage data set forth in DDX-2205, Dr. Staniford explained that the “long-term statistical profile” showed that 47 percent of the time the credit card charge is made at a restaurant. (Staniford Tr. at 866:15-25). In other words, he calculated on average how often the credit card is used at restaurants. It is calculated like any other average – dividing the number of items within a subset by the total number of items. (Smaha Tr. at 1745:1-8 (discussing DDX-2203).) Here, the total number of restaurant charges [7] was divided by the total number of credit card charges [17] to reach 47.1%. Thus, Dr. Staniford created a statistical profile by computing an average.

explained that statistics are used to analyze variable (as opposed to deterministic) data. (Kesidis Tr. at 710:8-711:20.) Specifically, he stated that “statistical analysis has to deal with variations in data, variations in features and decisions under uncertainty.” (*Id.* at 711:23-25.) He also explained that variance and standard deviation are examples of statistical measurements of such data. (*Id.* at 711:6-11.) He did not testify that a variance measurement was necessary to create a statistical profile. Another excerpt of Dr. Kesidis’ testimony that ISS cites is also inapposite: “[Y]ou could look at a select measure of data transfer, find its mean, its variance, create a statistical profile for it in the short-term.” (Kesidis Tr. at 675:4-6.) Here, Dr. Kesidis identified means and variances as examples of statistical measures, but again, he never testified that both were necessary to create a statistical profile.

III. NO REASONABLE JURY COULD CONCLUDE THAT THE ADS-CALCULATED CURRENT TRAFFIC RATE IS NOT AN AVERAGE

When applying the Court’s construction of “short-term statistical profile,” which as discussed above encompasses averages, no reasonable jury could find that ADS lacks such a profile. ADS determines a current traffic rate, the current traffic rate is in bits per second, and the rate is based on observation of traffic over a two minute period. (Song Tr. at 484:12-15; 485:7-22; 486:14-17; 497:25-498:3; 498:7-9; ISS Br. at 7.) All these facts are undisputed. Mr. Smaha elaborated:

“[ADS] accumulates the total number of bytes that have been seen on a particular connection over a two-minute snapshot. They use the term “snapshot” at Arbor. They used -- that name appears in the source code. It’s a snapshot of data. It’s just a total amount of bytes that have been seen, or bits, actually, that have been seen during the last two minutes. So they take that two-minute collection of data and convert it into a rate by taking the total number of bits and dividing it by 120.”

(Smaha Tr. at 1743:8-17.) Mr. Smaha and his demonstrative, reproduced below, showed that an average is determined by taking the sum (or total) of a group of items and dividing it by the number of items. (Smaha Tr. at 1745:1-8.):

2 Simple math:
Average of N items = $\frac{\text{Sum of N items}}{N}$

3 Bit rate: $\frac{\# \text{ bits moved}}{\text{Length of time}}$

(Ex) $\frac{12,000,000 \text{ bits in 2 minutes}}{120 \text{ seconds}}$
= 100,000 bits/sec

Fig. 1: Excerpt of ISS's Expert's DDX-2203.

Mr. Smaha applied the generic formula for calculating averages to the context of class grades. He noted that a teacher calculates the average grade for a class by totaling up the grades for each student in the class and then dividing that total by the number of students in the class. (*Id.*) The resulting average grade, of course, does not represent the grade of any particular student, rather it is a statistical description of the class's performance as a whole. (Kesidis Tr. at 713:18-25; 714:19-715:4.)

Comparing Mr. Smaha's explanation of how to calculate an average with his explanation of how ADS calculates the current traffic rate, the only reasonable conclusion is that the current traffic rate is an average. The ADS current traffic rate, or "bit rate" as labeled in Mr. Smaha's demonstrative, is calculated in precisely the same manner as an average. It is determined by taking the total amount of bits seen during an observation period and dividing it by the amount of

time over which the observation was made. In Mr. Smaha's example, 12,000,000 bits were observed in two minutes. There are 120 seconds in two minutes. So the bit rate is calculated by dividing the total bits seen, 12,000,000 bits, by the 120 seconds over which they were observed. (Smaha Tr. at 1745:9-19.) Bit rate calculation is simply application of the generic formula for calculating averages to the network traffic context.

Applying the bit rate formula to the more familiar context of car travel³ reinforces that a bit rate is an average. For example, if you drive 150 miles in three hours, your average speed is 50 miles per hour. As shown below, this is also your rate of travel over that same time period:

$$\begin{array}{l} \text{Rate of travel: } \frac{\# \text{ miles traveled}}{\text{Length of time}} \\ \\ \frac{150 \text{ miles in 3 hours}}{3 \text{ hours}} \\ \\ = 50 \text{ miles/hr} \end{array}$$

This average speed or rate of travel does not reflect your actual driving speed at any given moment in time during the three hours because you likely drove both slower (*e.g.*, on city streets) and faster (*e.g.*, on the highway). Rather, it is a statistical description of your speed for those three hours. Similarly, the ADS current traffic rate does not reflect the actual traffic at any given moment, as traffic spikes and lulls during the two-minute observation period. (Kesidis Tr. at 713:18-25; 714:19-715:4.) Instead, the current traffic rate is a statistical description of traffic for those two-minutes. Thus, even under Mr. Smaha's own explanation of the calculation of an

³ While Dr. Kesidis' testimony that a car speedometer may display an average speed may have surprised ISS (ISS Br. at 17), his testimony provided an accurate response to ISS's hypothetical question regarding car speedometers. He correctly explained that the speed displayed on a car speedometer actually represents the car's average speed over a very short period of time, not the car's actual instantaneous speed. (Kesidis Tr. at 714:1-716:1.)

average and of the ADS current traffic rate, the only reasonable conclusion for a juror to reach is that the current traffic rate is an average.

ISS's *own* description of the “averages” used by ADS to create historical baselines further reinforces that the current traffic rate is an average. ISS explained that ADS “calculate[d] the *average* traffic rates (in bps) for specific time slots within a day, week, and/or month.” (ISS Br. at 8; *see also* ISS Br. at 16.) Other than the fact that these “average traffic rates” are based on observation over a period of time longer than two minutes, ISS did not identify any difference in the way that they are calculated from the way the current traffic rate is calculated. They are all averages, all are represented in “bits per second” and all qualify as statistical profiles under the court’s claim construction.

Moreover, the asserted claims can be infringed even if an average is never calculated. To infringe the asserted claims, the current traffic rate need only be a “statistical description” “generated through the use of statistical analysis; that is, something more than simply collecting and retrieving data.” As explained in SRI’s Opening Brief, the ADS product does collect data – the number of bits transferred during a two minute snapshot – but it then goes on to do “something more” – “convert” that “collection of data” into a “rate” by dividing the total number of bits observed by the number of seconds over which they were observed. (Song Tr. at 497:25-498:3; Smaha Tr. at 1743:8-18; Op. Br. at 10) When ISS argues that ADS merely collects and retrieves data, ISS focuses solely on data collection, ignoring the subsequent bit rate calculation. (ISS Br. at 7, 11, 14.) Current traffic rate calculation, while based on collected data, requires something more – statistical analysis. The current traffic rate is therefore a short-term statistical profile as that term has been construed by the Court.

IV. NO REASONABLE JURY COULD CONCLUDE THAT ISS DOES NOT INFRINGE ALL ASSERTED CLAIMS

A. ISS Infringes Computer Program Product Claim 24

With respect to asserted claim 24, ISS disputes only whether the “short-term statistical profile” limitation is met. As detailed in SRI’s opening brief and above, the only reasonable conclusion based on the evidence and the Court’s claim construction is that ADS’s current traffic rate is a short-term statistical profile and that all the limitations of claim 24 are met. ISS’s sale of ADS therefore infringes claim 24. Any suggestion by ISS that evidence of deployment of the ADS products is also needed to show that ISS infringed claim 24 is incorrect. (ISS Br. at 7.) Claim 24 requires “[a] computer program product, disposed on a computer readable medium, the product including instructions for causing a processor to:” perform certain steps. The claim does not require actual performance of those steps or even deployment of the software in a network. Thus, ISS’s sale of the ADS Analyzer or the ADS Analyzer and Collector(s) infringes claim 24.⁴

B. ISS Infringes Method Claims 1, 11, 12, and 13

The evidence discussed in SRI’s opening brief also supports a ruling that ADS customers infringed claims 1, 11, 12, and 13 of the ’338 patent and that ISS intended them to do so.⁵

⁴ SRI and Dr. Kesidis consistently asserted that both the ADS Analyzer in “stand alone mode” and in “two-tier mode,” infringe the ’338 patent, as those phrases were used at trial. During his deposition, Dr. Kesidis excluded from the scope of his analysis of the method claims only the situation where the ADS Analyzer or ADS Collector only receives third-party net flows. (Kesidis Tr. at 718:22-720:6.) That issue is not pertinent to the instant motion.

⁵ The same evidence, along with the underlying fact that ISS introduced ADS as a commercial product, shows that ISS directly infringed the asserted method claims. When a company introduces a commercial product, no reasonable juror could conclude that the company did so without ever using or evaluating the product, particularly the capabilities it highlights in its marketing materials, before bringing the product to market. ISS presented nothing to the contrary. Any such direct infringement provides an additional ground upon which to grant SRI’s motion with regard to the method claims.

Therefore SRI requests that its motion for judgment as a matter of law regarding induced infringement be granted.

The evidence showed that ISS taught its customers to use the ADS Analyzer and Collectors in an infringing manner. (PTX-106 at 2 (ADS Data Sheet showing ADS deployment and use of packet capture), at 3 (highlighting the rate-based anomaly detection feature); at 4 (highlighting packet capture mode); PTX-107 at 6 (ADS User Guide showing ADS deployment and use of packet capture); at 22, 69 (teaching use of “rate alerts”).) ISS introduced no evidence in rebuttal that its customers for some reason do not follow these instructions. Therefore, the only reasonable conclusion that could be drawn from the evidence at trial is that ISS’s customers used the ADS products as instructed, thereby directly infringing method claims 1, 11, 12, and 13.

Based on ISS’s commercial introduction of ADS during the pendency of this litigation, its advertising and instruction on infringing use, and its failure to present any evidence of a non-infringement opinion, the only reasonable conclusion is that ISS had the specific intent necessary to induce infringement. That specific intent “may be inferred from circumstantial evidence where a defendant has both knowledge of the patent and specific intent to cause the acts constituting infringement.” *Ricoh Co., Ltd. v. Quanta Computer Inc.*, 550 F.3d 1325, 1342 (Fed. Cir. 2008)(citing *DSU Med. Corp. v. JMS Co., Ltd.*, 471 F.3d 1293, 1306 (Fed. Cir. 2006)). Here, ISS has been aware of the ’338 patent since at least the filing of this lawsuit in 2004, yet it proceeded to introduce the ADS product with packet capture capabilities and “heuristic #8” in March 2006. (Tosto Tr. at 479:1-5.) ISS’s inclusion of these features provides further evidence of its intent that customers use ADS to infringe. *Ricoh*, 550 F.3d. at 1343 (“a failure to remove or diminish infringing features of a distributed product is relevant to a party’s intent that those features be used for direct infringement.”) Not only did ISS introduce ADS with these features,

it highlighted them in its advertising and taught customers how to use them in product manuals. (PTX-106; PTX-107 at 6, 22, 69.) ISS's explicit instruction on how to engage in infringing uses "goes beyond a product's characteristics or the knowledge that it may be put to infringing use, and shows statements or actions directed to promoting infringement," thereby making a finding of specific intent to induce reasonable. *Ricoh*, 550 F.3d at 1341 (*quoting Grokster*, 545 U.S. at 935). In fact, the Supreme Court in *Grokster*, 545 U.S. at 936, explicitly stated "[e]vidence of active steps . . . taken to encourage direct infringement, such as advertising an infringing use or instructing how to engage in an infringing use, show an affirmative intent that the product be used to infringe" Further supporting the finding that ISS specifically intended that its ADS customers infringe the '338 patent was the fact that ISS did not provide any evidence that it obtained a legal opinion of non-infringement. *Broadcom Corp. v. Qualcomm Inc.*, 543 F.3d 683, 699 (Fed. Cir. 2008) (affirming district court finding of induced infringement when defendant elected not to produce opinion of counsel regarding patent validity and holding that opinion of counsel evidence "remains relevant to the second prong of the intent analysis" and "the failure to procure such an opinion may be probative of intent").

In rebuttal to the evidence showing that ISS intended its customers to infringe, ISS can point only to testimony regarding Arbor Networks' instructions to its customers. (ISS Br. at 6.) However, it is ISS's intent, not Arbor Networks', that is at issue. Thus, the only reasonable conclusion based on the evidence of ISS's intent is that ISS intended its ADS customers to infringe the '338 patent.

V. CONCLUSION

For the above reasons, SRI respectfully requests that this Court enter judgment as a matter of law that ISS directly infringed and induced infringement of method claims 1, 11, 12, and 13, and computer product claim 24 of the '338 patent. Alternatively, SRI respectfully requests that the Court order a new trial as to ISS's infringement as the jury's verdict was against the clear weight of the evidence, and a new trial is necessary to prevent a miscarriage of justice.

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CERTIFICATE OF SERVICE

I hereby certify that on February 17, 2009, I electronically filed with the Clerk of Court the **SRI'S REPLY BRIEF RE ITS RENEWED MOTION FOR JUDGMENT AS A MATTER OF LAW, OR IN THE ALTERNATIVE, MOTION FOR NEW TRIAL REGARDING INFRINGEMENT OF THE '338 PATENT** using CM/ECF which will send electronic notification of such filing(s) to the following Delaware counsel:

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